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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/Gradation/2015-16 18.05.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. B.B. Umesh,**
#385, Bettaulsur (P), Bangalore North Taluk.

Name of Work : Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015

Date of Testing : 18.05.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	150	150	3.0	97.0	95-100
22.4	1590	1740	34.8	65.2	60-80
11.2	965	2705	54.1	45.9	40-60
4.75	650	3355	67.1	32.9	25-40
2.36	490	3845	76.9	23.1	15-30
0.600	430	4275	85.5	14.5	8-22
0.075	495	4770	95.4	4.6	0-8

Note:

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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/Gradation/2015-16 18.05.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. B.B. Umesh,**
#385, Bettaulsur (P), Bangalore North Taluk.

Name of Work : Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015

Date of Testing : 18.05.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	195	195	3.9	96.1	95-100
22.4	1650	1845	36.9	63.1	60-80
11.2	1090	2935	58.7	41.3	40-60
4.75	780	3715	74.3	25.7	25-40
2.36	480	4195	83.9	16.1	15-30
0.600	300	4495	89.9	10.1	8-22
0.075	315	4810	96.2	3.8	0-8

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GRADATION FOR WMM
MORTH TABLE-400-11

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Agency : **Mr. B.B. Umesh,**
#385, Bettaulsur (P), Bangalore North Taluk.

Name of Work : Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015

Date of Testing : 18.05.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	185	185	3.7	96.3	95-100
22.4	1520	1705	34.1	65.9	60-80
11.2	1030	2735	54.7	45.3	40-60
4.75	795	3530	70.6	29.4	25-40
2.36	460	3990	79.8	20.2	15-30
0.600	300	4290	85.8	14.2	8-22
0.075	380	4670	93.4	6.6	0-8

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GRADATION FOR WMM
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Name of Work : Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015

Date of Testing : 18.05.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	165	165	3.3	96.7	95-100
22.4	1425	1590	31.8	68.2	60-80
11.2	1090	2680	53.6	46.4	40-60
4.75	675	3355	67.1	32.9	25-40
2.36	490	3845	76.9	23.1	15-30
0.600	485	4330	86.6	13.4	8-22
0.075	425	4755	95.1	4.9	0-8

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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/AIV/2015-16 18.05.2015

Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	18.05.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	384	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	80	81	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	305	303	
4	Aggregate Impact value = percent fines	20.78	21.09	
	100* (W_2/W_1)%			**20.94**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/AIV/2015-16 18.05.2015

Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
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Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	18.05.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	303	303	
4	Aggregate Impact value = percent fines	21.30	21.50	
	100* (W_2/W_1)%			**21.40**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Basaveshwaranagar, Bangalore-560 079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/S-T/2015-16 18.05.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	18.05.2015

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **12.13%**

Elongation Index = **13.23%**

Result : Combined Flakiness & Elongation index 25.36%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.09/BBU/WMM/S-T/2015-16 18.05.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
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Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	18.05.2015

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **12.99%**

Elongation Index = **13.90%**

Result : Combined Flakiness & Elongation index 26.89%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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T-2377

Job No: CTCE/BBMP/W.No.09/BBU/CSR-06/880i/SDBC(QB)/2015-16 20.06.2015

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

*CUSTOMER	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
*NAME OF THE WORK	:	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
*SAMPLE ID	:	Bitumen
DATE OF SAMPLING	:	18.06.2015
PERIOD OF TESTING	:	20.06.2015

The results of the tests conducted on the bitumen sample using for Semi Dense Bituminous Concrete.

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2009)	84	80 to 100
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2009)	44	Min. 40
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2009)	100 >	Min. 75
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2009)	302	Min. 220

*Information is furnished by the Customer/Representative.

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VIDYARANI P.K.
Technical Manager

****

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Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/AIV/2015-16 20.06.2015

Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	20.06.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	392	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	304	306	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.85	21.94	21.89

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
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Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	20.06.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	392	394	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	90	91	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	303	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.96	23.10	**23.03**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Shape_T/2015-16 20.06.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	20.06.2015

Result : Flakiness Index = **11.35%**

Elongation Index = **13.25%**

Result : Combined Flakiness & Elongation index **24.60%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Shape_T/2015-16 20.06.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
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Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	20.06.2015

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **12.65%**

Elongation Index = **13.82%**

Result : Combined Flakiness & Elongation index **26.47%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Stripping/2015-16 22.06.2015

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	22.06.2015

Type of binder : 80/100
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.0 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.3	3.40	96.60
2	3.4		
3	3.5		

Comments:

→ Minimum allowable Aggregate retained coating for Semi Dense Bituminous Concrete is 95%

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Sp_Wa/2015-16 22.06.2015

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Type of Mix	Semi Dense Bituminous Concrete
Source / Location	Hotmix Plant, Bangalore
Date of Testing	22.06.2015

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2008	2009	2010	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1258	1259	1260	
4	Weight of saturated surface dry aggregate in air	W_3 g	2002	2003	2004	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	744	744	744	
6	Weight of oven dried aggregate	W_4 g	1990	1991	1991	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.675	2.676	2.676	2.676
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.719	2.720	2.724	2.721
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.60%	0.60%	0.65%	0.62%

Comments:

→ Maximum allowable Aggregate Water absorption value for Semi Dense Bituminous Concrete is 2.0%

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Bitumen/2015-16 22.06.2015

BITUMEN DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC : SP : 11 - 1984

CUSTOMER	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
NAME OF THE WORK	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
SAMPLE I/D	Roads in Anjaneya Layout, Ward No.09, BBMP, Bangalore.
DATE OF TESTING	22.06.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	475
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.00
7. Bitumen content in %	5.20	5.00
8. Average	**5.10**	

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Bitumen/2015-16 22.06.2015

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CUSTOMER	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
NAME OF THE WORK	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
SAMPLE I/D	Roads in Anjaneya Layout, Ward No.09, BBMP, Bangalore.
DATE OF TESTING	22.06.2015

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	28.56	6.03	6.03	93.97	90-100
4.75	260.3	54.92	60.94	39.06	35-51
2.36	52.35	11.04	71.99	28.01	24-39
1.18	44.36	9.36	81.34	18.66	15-30
0.3	26.15	5.52	86.86	13.14	9-19
0.075	34.15	7.20	94.07	5.93	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	32.26	6.79	6.79	93.21	90-100
4.75	263.2	55.41	62.20	37.80	35-51
2.36	50.22	10.57	72.77	27.23	24-39
1.18	42.15	8.87	81.65	18.35	15-30
0.3	21.15	4.45	86.10	13.90	9-19
0.075	30.22	6.36	92.46	7.54	3-8

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#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-560 079.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/AGG/2016-17 22.06.2015

Aggregate Gradation Test

IS : 2386 Part I

Customer	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the Work	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	22.06.2015

Total Weight of Sample: **5300** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade II MORTH specification
9.5	355	6.7	6.70	93.30	90-100	
4.75	2915	55.0	61.70	38.30	35-51	
2.36	630	11.9	73.58	26.42	24-39	
1.18	400	7.5	81.13	18.87	15-30	
0.3	325	6.1	87.26	12.74	9-19	
0.075	350	6.6	93.87	6.13	3-8	

Total Weight of Sample: **5400** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade II MORTH specification
9.5	325	6.0	6.02	93.98	90-100	
4.75	2650	49.1	55.09	44.91	35-51	
2.36	615	11.4	66.48	33.52	24-39	
1.18	415	7.7	74.17	25.83	15-30	
0.3	500	9.3	83.43	16.57	9-19	
0.075	545	10.1	93.52	6.48	3-8	

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Job No.: CTCE/BBMP/W.No.09/BBU/SDBC/Stability/2015-16 22.06.2015

TEST REPORT ON STABILITY OF MIX

Customer	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. B.B. Umesh,** #385, Bettaulsur (P), Bangalore North Taluk.
Name of the Work	:	Improvements & Asphalting to Anjaneya Layout balance roads in Ward No.09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/10(16713)WO/36/2015-16 Dated: 22.04.2015
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Semi Dense Bituminous Concrete
Date of Testing	:	22.06.2015

The results of the tests conducted on the Semi Dense Bituminous Concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-16)
1	Marshal Stability, Kn	8.50	8.75	8.2 Kn (min)
2	Marshal flow, mm	3.05	3.20	2 – 4
3	Percent air voids in Mineral Aggregate	3.50	4.05	3 – 5
4	Voids in Compacted Mix	13.20	13.50	13 – 15
5	Percent Voids filled with Bitumen	66.80	67.50	65 - 78
6	Density, g/cc	2.26	2.27	--

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